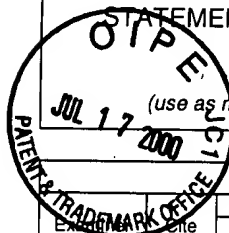




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(Modified) PTO/SB/08A-B (10-96)  
Approved for use through 10/31/99. OMB 0651-0031

<b>Substitute for form 1449A-B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	<b>Complete if Known</b>	
	Application Number	09/437,726
	Filing Date	November 9, 1999
	First Named Inventor	Willem P. C. Stemmer
	Group Art Unit	1643-1634
	Examiner Name	Unassigned
	Attorney Docket Number	02-029220US



## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
B2H	AA	WO	98/35966		MAXYGEN, INC.	10-02-1997		

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
B2H	AB	Spreitzer, Robert J. (1993) <i>Annu. Rev. Plant Physiol. Plant Mol. Biol.</i> "Genetic Dissection of Rubisco Structure and Function" 44:411-34	
	AC	Larimer F.W et al. " <u>Rhodobacter capsulatus</u> Calvin cycle carbon dioxide fixation operon:..." <i>EMBL Database Entry RC23145; Accession No. U23145, 14 April 1995</i>	
	AD	Crameri A. et al., "DNA shuffling of A Family of Genes From Diverse Species Accelerates Directed Evolution" <i>Nature</i> Vol. 391, 15-01-1998, pp 288-291	
	AE	Jamet E. et al "Genes encoding the small subunit of RUBISCO belonging to two highly conserved subfamilies in Nicotianeae" <i>Journal of Molecular Evolution</i> vol. 33 no., 3 September 1991	
	AF	Wolter F.P. et al., "rbcS genes in Solanum tuberosum: Conservation of transit peptide and exon shuffling during evolution" <i>Proceedings of the National Academy of Sciences of USA</i> vol. 85, February 1988 pp. 846-850	
	AG	Flachmann R. et al., "Mutations in the Small Subunit of Ribulose-1,5-Bisphosphate Carboxylase/Oxygenase Increase the Formation of the Misfire Product Xylulose-1,5-Bisphosphate" <i>Plant Physiology</i> vol. 114 no. 1, May 1997 pp 131-136	

Examiner Signature	B. R. Sison	Date Considered	1-25-03
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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(Modified) PTO/SB/08A-B (10-96)  
Approved for use through 10/31/99. OMB 0651-0031

Substitute for form 1449 PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)	Complete if Known	
	Application Number	09/437,726
	Filing Date	November 9, 1999
	First Named Inventor	Willem P. C. Stemmer
	Group Art Unit	1643 / 655
	Examiner Name	Unassigned
Attorney Docket Number		02-029220US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
BFA	AA	4,407,956		Howell	10-04-1983	

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Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
BFA	AB	WO	✓ 95/22625		Affymax Technologies, N.V.	08-24-1995		
BFA	AC	EP	✓ 0270356B1		Agracetus, Inc.	06-01-1994		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T	
BXL	AD	ALTSCHUL <i>et al.</i> , <i>J. Mol. Biol.</i> 215:403-410 (1990)		
/	AE	BAKER <i>et al.</i> [1985] <i>Plant Genetics</i> 201-211		
/	AF	BYTEIBER, <i>et al.</i> (1987) <i>Proc. Natl. Acad. Sci. USA</i> : 5345-5349		
/	AG	DANIELL <i>et al.</i> , (1998) <i>Nature Biotechnology</i> 16:346		
/	AH	DE LA PENA <i>et al.</i> [1987], <i>Nature</i> 325:274-276		
/	AI	DUNN <i>et al.</i> , (1988) <i>J. Biol. Chem</i> 263:10878		
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/	AM	GOODSPEED <i>et al.</i> , (1989) <i>Gene</i> 76:1		
/	AN	GRAVES AND GOLDMAN, (1986) <i>Plant Mol. Biol</i> 7: 43-50		
/	AO	HAYASHIMOTO <i>et al.</i> (1990) <i>Plant Physiol.</i> 93: 857		
/	AP	HENIKOFF & HENIKOFF (1989) <i>Proc. Natl. Acad. Sci. USA</i> 89:10915		
/	AQ	HERNALSTEENS <i>et al.</i> , (1984) <i>EMBO J.</i> 3:3039-41		
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-PJA	AS	HOOYKAS-VAN SLOGTEREN <i>et al.</i> , (1984) <i>Nature</i> 311:763-764		

Examiner Signature	B. J. Lison	Date Considered	4-9-01
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Approved for use through 10/31/99. OMB 0651-0031

Substitute for form PTO/SB/08A-B/PTO <b>TECH CENTER</b> INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Complete if Known	
	Application Number	09/437,726
	Filing Date	November 9, 1999
	First Named Inventor	Willem P. C. Stemmer
	Group Art Unit	1643 / 65-5
	Examiner Name	Unassigned
	Attorney Docket Number	02-029220US

<del>18</del>	AT	<u>HORSCH et al.</u> , (1984) "Inheritance of Functional Foreign Genes in Plants," <u>Science</u> , 233:496-498	
<del>19</del>	AU	<u>KLEIN et al.</u> , (1987) <i>Nature</i> 327:70-73	
<del>20</del>	AV	<u>MATTILA et al.</u> , (1991) <i>Nucleic Acids Res.</i> 19:4967	?
<del>21</del>	AW	<u>NEEDLEMAN and WUNSCH</u> (1970) <i>J. Mol. Biol.</i> 48:443	
<del>22</del>	AX	<u>PARSON and LIPMAN</u> (1988) <i>Proc. Natl. Acad. Sci. USA</i> 85:2444	
<del>23</del>	AY	<u>PASZKOWSKI et al.</u> , (1984) <i>EMBO J.</i> 3:2717-22	
<del>24</del>	AZ	<u>SMITH and WATERMAN</u> (1981) <i>Adv. Appl. Math</i> 2:482	

Examiner Signature		Date Considered	
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# 4

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Application Number	09/437,726
Filing Date	November 9, 1999
First Named Inventor	Willem P. C. Stemmer
Group Art Unit	1645 / 1655
Examiner Name	Unassigned
Attorney Docket Number	02-029220US

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
B7A	AA	5,512,463		Stemmer	04-30-1996	
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	AN	5,928,905		Stemmer, et al.	07-27-1999	
	AO	5,939,250		Short, Jay M.	08-17-1999	
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	AQ	5,942,430		Robertson, et al.	08-24-1999	
	AR	5,948,666		Callen, et al.	09-07-1999	
	AS	5,958,672		Short, Jay M.	09-28-1999	
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	AW	5,965,408		Short, Jay M.	10-12-1999	
B7B	AX	5,985,646		Murphy, et al.	11-16-1999	

Examiner  
Signature

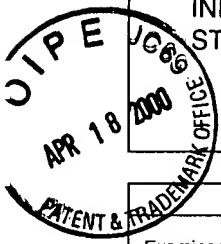
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Considered

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#4



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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

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## Complete if Known

Application Number	09/437,726
Filing Date	November 9, 1999
First Named Inventor	Willem P. C. Stemmer
Group Art Unit	1643 1655
Examiner Name	Unassigned
Attorney Docket Number	02-029220US

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
1-2318	AY	WO	97/07205		Novo Nordisk A/S	02-27-1997		
2	AZ	WO	97/20078		Affymax Technologies	06-05-1997		
3	BA	WO	97/25410		Novo Nordisk A/S	07-17-1997		
4	BB	WO	97/35957		Maxygen, Inc.	10-02-1997		
5	BC	WO	97/35966		Maxygen, Inc.	10-02-1997		
6	BD	WO	97/44361		Recombinant Biocatalysis Inc.	11-27-1997		
7	BE	WO	97/48416		Recombinant Biocatalysis, Inc.	12-24-1997		
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11	BI	WO	98/01581		Recombinant Biocatalysis Inc	01-15-1998		
12	BJ	WO	98/13485		Maxygen, Inc.	04-02-1998		
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14	BL	WO	98/24799		Diversa Corp.	06-11-1998		
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16	BN	WO	98/28416		Novo Nordisk A/S	07-02-1998		
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20	BR	WO	98/41623		Novo Nordisk A/S	09-24-1998		
21	BS	WO	98/41653		Novo Nordisk A/S	09-24-1998		
22 BxA	BT	WO	98/42832		California Institute of	10-01-1998		

Examiner  
Signature

B. A. Lison

Date  
Considered

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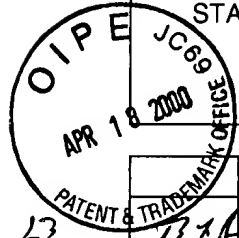
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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	09/437,726
Filing Date	November 9, 1999
First Named Inventor	Willem P. C. Stemmer
Group Art Unit	1643 1655
Examiner Name	Unassigned
Attorney Docket Number	02-029220US



Technology

Diversa Corp. 10-29-1998

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Diversa Corp. 09-10-1999

Maxygen, Inc. 11-11-1999

Maxygen, Inc. 12-23-1999

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4-9-01

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#10

Substitute for form 1449A-B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	<b>Complete if Known</b>	
	Application Number	09/437,726
	Filing Date	November 9, 1999
	First Named Inventor	Willem P. C. Stemmer
	Group Art Unit	1643 / 655
	Examiner Name	Unassigned
Attorney Docket Number		02-029220US

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U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
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X BxA	AA	Crameri et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <u>Nuc. Acids Res.</u> 21(18):4410.		
2 BxA	AB	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <u>Tumor Targeting</u> 4:59-62.		

Examiner Signature	<i>B. L. Simon</i>	Date Considered	4-8-01
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